

Amendments to the Claims

1. (Original Claim) A tip cap for sealingly covering the distal end of a syringe comprising:

a cylindrical housing having a bottom portion comprising an inner end wall and an outer end wall, a top portion comprising a rim and an annular skirt extending from said top portion to said bottom portion having an inner surface and an outer surface and means for venting air from said syringe and for providing tactile means to the user that said syringe has been vented by said tip cap.

2. (Original Claim) The tip cap of claim 1, wherein said means for venting is an inner plug that projects proximally from said inner end wall of said bottom portion.

3. (Original Claim) The tip cap of claim 2, further comprising an intermediate wall projecting proximally from said inner end wall of said bottom portion and spaced in surrounding relationship to said plug.

4. (Original Claim) The tip cap of claim 3, wherein said intermediate wall comprises an outer surface that is substantially cylindrical and an inner surface that is defined by intersecting planar surfaces.

5. (Original Claim) The tip cap of claim 4, wherein said inner surface of said intermediate wall is substantially a hexagonal cross-section.

6. (Original Claim) The tip cap of claim 5, wherein said outer surface of said intermediate wall comprises vertical interference strips.

7. (Original Claim) The tip cap of claim 6, wherein said interference strips comprise a first position to indicate a first venting position to the user and a second position to indicate to the user that said tip cap and said syringe are removably secure.

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8. (Original Claim) The tip cap of claim 7, further comprising a generally cylindrical internal sealing ring extending from said inner surface of said annular skirt and said inner end wall of said bottom portion.

9. (Original Claim) The tip cap of claim 8, wherein said internal sealing ring comprises an inner wall surface and an outer wall surface.

10. (Original Claim) The tip cap of claim 9, wherein said internal sealing ring is separated from said outer surface of said intermediate wall by a first annular space.

11. (Original Claim) The tip cap of claim 10, further comprising a second annular space between said inner surface of said annular skirt and said inner wall surface of said internal sealing ring.

12. (Original Claim) The tip cap of claim 11, further comprising indentations on said inner wall surface of said internal sealing ring.

13. (Original Claim) A syringe assembly comprising:
a syringe comprising a barrel, a syringe tip, a luer connection, a needle and a plunger rod with a piston member on the distal end of said plunger rod; and
a tip cap over said distal end of said syringe barrel comprising a cylindrical housing having a bottom portion comprising an inner end wall and an outer end wall, a top portion comprising a rim and an annular skirt extending from said top portion to said bottom portion having an inner surface and an outer surface and means for venting air from said syringe and for providing tactile means to the user that said syringe has been vented by said tip cap.

14. (Original Claim) The assembly of claim 13, wherein said means for venting is an inner plug that projects proximally from said inner end wall of said bottom portion.

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15. (Original Claim) The assembly of claim 14, further comprising an intermediate wall projecting proximally from said inner end wall of said bottom portion and spaced in surrounding relationship to said plug.

16. (Original Claim) The assembly of claim 15, wherein said intermediate wall comprises an outer surface that is substantially cylindrical and an inner surface that is defined by intersecting planar surfaces.

17. (Original Claim) The assembly of claim 16, wherein said inner surface of said intermediate wall is substantially a hexagonal cross-section.

18. (Original Claim) The assembly of claim 17, wherein said outer surface of said intermediate wall comprises vertical interference strips.

19. (Original Claim) The assembly of claim 18, wherein said interference strips comprise a first position to indicate a first venting position to the user and a second position to indicate to the user that said tip cap and said syringe are removably secure.

20. (Original Claim) The assembly of claim 19, further comprising a generally cylindrical internal sealing ring extending from said inner surface of said annular skirt and said inner end wall of said bottom portion.

21. (Original Claim) The assembly of claim 20, wherein said internal sealing ring comprises an inner wall surface and an outer wall surface.

22. (Original Claim) The assembly of claim 21, wherein said internal sealing ring is separated from said outer surface of said intermediate wall by a first annular space.

23. (Original Claim) The assembly of claim 22, further comprising a second annular space between said inner surface of said annular skirt and said inner wall surface of said internal sealing ring.

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24. (Original Claim) The assembly of claim 23, further comprising indentations on said inner wall surface of said internal sealing ring.

25. (Previously Presented) A tip cap for a syringe, comprising:
a housing comprising a bottom portion having an annular skirt extending therefrom, a first annular ring located within the skirt, and a second annular ring located within the first annular ring, wherein an annular space exists between at least a portion of the first annular ring and the second annular ring, and wherein the second annular ring or both the first annular ring and the second annular ring are capable of engaging a threaded luer connection.

26. (Previously Presented) The tip cap of claim 25, wherein a second annular space exists between at least a portion of the skirt and the first annular ring.

27. (Previously Presented) The tip cap of claim 26, wherein the second annular ring comprises an interior surface and an exterior surface, and wherein the exterior surface comprises at least two vertical strips.

28. (Previously Presented) The tip cap of claim 27, wherein the vertical strips are capable of engaging and providing securement to the threaded luer connection.

29. (Previously Presented) The tip cap of claim 28, wherein the vertical strips are deformable upon contact with the threaded luer connection, the deformation providing the securement to the threaded luer connection.

30. (Previously Presented) The tip cap of claim 25, wherein the first annular ring and the second annular ring extend from the bottom portion of the housing.

31. (Previously Presented) The tip cap of claim 25, wherein the annular gap between the first annular ring and the second annular ring is continuous.

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32. (Previously Presented) The tip cap of claim 25, further comprising a vent located proximate the bottom portion of the housing, the vent located within the second annular ring.

33. (Previously Presented) The tip cap of claim 32, wherein the vent is integral with the bottom portion.

34. (Previously Presented) The tip cap of claim 32, wherein the vent is sized to fit into a syringe tip.

35. (Previously Presented) The tip cap of claim 32, wherein the vent is a solid plug.

36. (Previously Presented) The tip cap of claim 35, wherein the plug comprises a substantially circular, tapered outer wall having one or more flattened portions thereon.

37. (Previously Presented) The tip cap of claim 25, wherein an interior surface of the second annular ring comprises one or more planar portions.

38. (Currently Amended) A tip cap for a syringe, comprising:
a housing comprising a bottom portion having an annular skirt extending therefrom and an annular ring located within the skirt, the annular ring having an interior surface and an exterior surface, wherein the exterior surface comprises at least two vertical strips,
wherein the at least two vertical strips comprises a first strip of a first length and a second strip of a second length.

39. (Previously Presented) The tip cap of claim 38, wherein the vertical strips are capable of engaging and providing securement to a threaded luer connection.

40. (Previously Presented) The tip cap of claim 39, wherein the vertical strips are deformable upon contact with the threaded luer connection, the deformation providing the securement to the threaded luer connection.

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41. (Currently Amended) The tip cap of claim 38, further comprising a vent located proximate the bottom portion of the housing, the vent located within the second annular ring.

42. (Previously Presented) The tip cap of claim 41, wherein the vent is integral with the bottom portion.

43. (Previously Presented) The tip cap of claim 41, wherein the vent is sized to fit into a syringe tip.

44. (Previously Presented) The tip cap of claim 41, wherein the vent is a solid plug.

45. (Previously Presented) The tip cap of claim 44, wherein the plug comprises a substantially circular tapered outer wall having one or more flattened portions thereon.

46. (Previously Presented) The tip cap of claim 38, wherein an interior surface of the annular ring comprises one or more planar portions.

47. (Previously Presented) A tip cap designed for a syringe having a barrel, a syringe tip, and a luer connection at a distal end of the barrel, the tip cap comprising:

a housing comprising a bottom portion having an annular skirt extending therefrom and an annular ring located within the skirt, wherein the inner diameter of the skirt at the end of the skirt opposite the bottom portion is greater than the outer diameter of the syringe barrel.

48. (Previously Presented) The tip cap of claim 47, wherein upon physical engagement of the tip cap with the luer connection, the skirt extends proximally over the syringe such that the luer connection is contained within the interior of the housing.

49. (Previously Presented) The tip cap of claim 48, wherein upon engagement of the tip cap with the luer connection, the end of the skirt opposite the bottom portion surrounds a portion of the barrel.

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50. (Previously Presented) The tip cap of claim 47, wherein an exterior surface of the annular ring comprises at least two vertical strips, and wherein the vertical strips are capable of engaging and providing securement to the threaded luer connection.

51. (Previously Presented) The tip cap of claim 50, wherein the vertical strips are deformable upon contact with the threaded luer connection, the deformation providing the securement to the threaded luer connection.

52. (Currently Amended) The tip cap of claim 47, further comprising a vent located proximate the bottom portion of the housing, the vent located within the second annular ring.

53. (Previously Presented) The tip cap of claim 52, wherein the vent is integral with the bottom portion.

54. (Previously Presented) The tip cap of claim 52, wherein the vent is sized to fit into the syringe tip.

55. (Previously Presented) The tip cap of claim 52, wherein the vent is a solid plug.

56. (Previously Presented) The tip cap of claim 47, further comprising an intermediate annular ring located between the skirt and the annular ring, wherein an annular space exists between at least a portion of the annular ring and the intermediate annular ring, and wherein the annular ring or both the annular ring and the intermediate annular ring are capable of engaging the threaded luer connection.

57. (Previously Presented) The tip cap of claim 56, wherein a second annular space exists between at least a portion of the skirt and the intermediate annular ring.